

## **Historic, Archive Document**

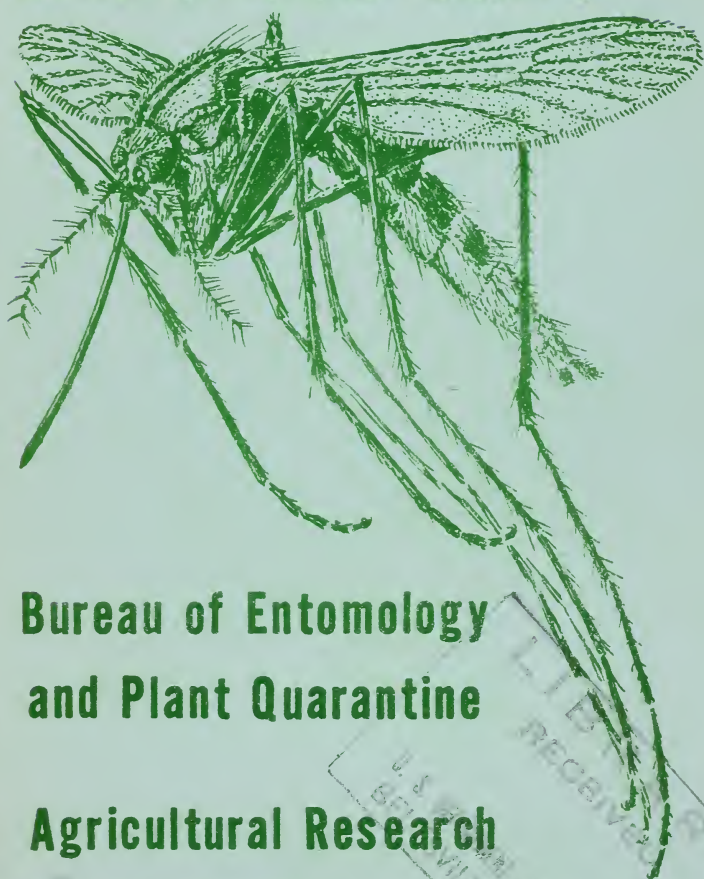
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# *Protection* AGAINST MOSQUITOES IN MOUNTAIN RECREATIONAL CAMPS

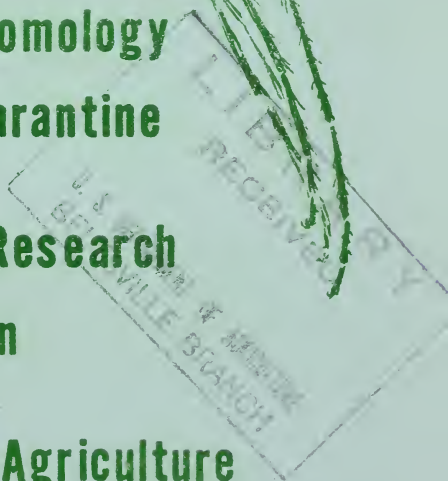


Bureau of Entomology  
and Plant Quarantine

Agricultural Research  
Administration

U. S. Dept. of Agriculture

September 1952



**MOSQUITOES** limit the use of many mountain recreational areas. Thousands of people who seek the out-of-doors for rest and relaxation are discouraged by the hordes of these annoying pests.

Control by the usual methods of destroying the larvae is difficult except by community effort, and in sparsely populated areas is rarely feasible. The larvae must be destroyed over wide areas, because the adults can fly long distances.

Campers and camp and resort organizations can obtain relief from the mosquito nuisance with a minimum of cost and effort by spraying to kill adult mosquitoes. A long-lasting DDT residual spray applied to vegetation and ground cover in and around a camp site kills mosquitoes that alight on the sprayed vegetation. This treatment greatly reduces the number of mosquitoes during daylight hours. For a 2-hour period in the early evening, however, when they are continuously flying, the residual treatment does not give adequate protection. At this time a quick-killing space spray containing pyrethrum or allethrin will give temporary protection by killing mosquitoes in flight. DDT kills too slowly for such spraying.

### Protection for Small Groups

For family campers or other small groups, a low - cost portable power

sprayer is the most satisfactory for applying a residual spray on vegetation, tents, and groundlitter. The best all-round equipment is a small paint sprayer powered by a gasoline motor, since electricity usually is not available. Such a machine weighs from 50 to 80 pounds, is compact, and can be carried in the car. Adjust the spray head to give a coarse, wet spray that will adhere to foliage. If a power sprayer is not available, use a hand sprayer.



A small paint sprayer powered by a gasoline motor.

DDT is the best insecticide for residual spraying, although other insecticides, such as methoxychlor, TDE, and lindane, can be used. For use in a small paint sprayer a 25 - percent DDT emulsifiable concentrate diluted with water to give a 10-percent emulsion is satisfactory. A high concentration is necessary because of the small output of these sprayers. Wettable powders are not suitable for use



in paint sprayers.

For a few days' protection apply at least 2 quarts over the camp site ( $1/2$  to 1 acre). If you need protection for a longer period, apply 1 gallon per acre over an acre or more.

You can also use a paint sprayer for applying a pyrethrum or allethrin space spray during the evening flight of mosquitoes. Household sprays containing these insecticides are suitable for this purpose and are usually available. Adjust the nozzle to produce a fine mist. Set the sprayer up-wind and let the spray drift through the camp area. Intermittent operation every few minutes reduces mosquito annoyance.

### Protection in Larger Areas

In larger areas, such as organization camps, Forest Service camps, and resorts, different equipment is required. The object is to cover the area, whether 1 or 50 acres, with an even distribution of insecticide.

For such use mist blowers of various sizes are available. They give wider distribution of the insecticide than orchard sprayers. The size blower to use depends on the area to be sprayed and the roads available. Some spray units can be transported on a trailer or truck along a path or road and the spray drifted from 50 to about 200 feet. If there are no roads, the only practical unit is a portable device that can be carried through the brush or hauled on a wheelbarrow along foot-paths. Such a device weighs about 90 pounds.



A portable mist blower.  
Courtesy of Connecticut Agricultural  
Experiment Station



Applying DDT residual spray with a  
portable mist blower.

A 5-percent DDT emulsion applied at 5 gallons per acre will remain effective on vegetation for about 2 to 4 weeks. Apply it in swaths to cover the entire area. To prepare this spray add 4 parts of water to 1 part of a 25-percent DDT emulsifiable concentrate.

Most of the larger mist blowers are provided with agitators. Therefore, in such equipment a suspension can be used instead of an emulsion if desired. It should not contain more than 2.5 percent of DDT. To prepare this suspension mix 1/2 pound of a 50-percent DDT wettable powder in 1 gallon of water.



A large mist blower for spraying along roads.

Pyrethrum and allethrin sprays dispersed throughout the camp gathering place in the evening will give protection while mosquitoes are on the wing. A series of mist sprayers can be installed permanently for this purpose, to be operated when mosquitoes are annoying. A hose leading from a large compressor will furnish air to operate several spray heads. Further



relief may be obtained by applying a repellent to the skin and using an aerosol bomb or hand sprayer indoors.

## PRECAUTIONS

Handle insecticides with care and avoid exposure to the sprays. If you spill the concentrated material on your skin or clothing, wash it off immediately. Do not contaminate foods and food utensils with insecticides. Do not apply excessive amounts to water containing fish.

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A list of companies supplying paint sprayers or mist blowers will be furnished on request.

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Prepared by the  
Division of Insects Affecting  
Man and Animals

